NVR Specifications		
Sl. No.	**Parameter**	**Technical Specifications**
1	Processor	Industrial-grade processor
2	IP Camera Input	32 Channel
3	Operating System	Embedded LINUX
4	User Interface	Web, Local GUI
5	Video Output	1-channel VGA, 1-channel HDMI video output. HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 VGA: 1920 × 1080, 1280 × 1024, 1280 × 720 *Simultaneous/heterogeneous video sources output for VGA and HDMI is configurable.
6	Compression	H.265, H.264, MJPEG
7	Encode Strategy	Instastream
8	Decoding Capability	AI disabled: 2-channel 16 MP@30 fps, 2-channel 12 MP@30 fps, 4-channel 8 MP@30 fps, 6-channel 5 MP@30 fps, 8-channel 4 MP@30 fps, 16-channel 1080p@30 fps AI enabled: 1-channel 16 MP@30 fps, 2-channel 12 MP@30 fps, 3-channel 8 MP@30 fps, 4-channel 5 MP@30 fps, 6-channel 4 MP@30 fps, 12-channel 1080p@30 fps
9	AI by NVR	Face detection; face recognition; perimeter protection; SMD Plus
10	Resolution	32 MP; 24 MP; 16 MP; 12 MP; 8 MP; 5 MP; 4 MP; 1080p; 720p; D1; CIF; QCIF
11	Network Bandwidth	32 MP; 24 MP; 16 MP; 12 MP; 8 MP; 5 MP; 4 MP; 1080p; 720p; D1; CIF; QCIF
12	Video Display Split	Main screen: 1/4/8/9/16/25 Sub screen: 1/4/8/9/16
13	Perimeter Performance AI by NVR (Number of Channels)	2 channels, 10 IVS rules for each channel
14	Perimeter Performance of AI by Camera (Number of Chann	16 channels
15	Face Attributes	Gender; age group; glasses; expressions; face mask; beard
16	Face Detection Performance of AI by Recorder (Number of	2 channels (up to 12 face images/s each channel)
17	Face Detection Performance of AI by Camera (Number of C	8 channels
18	Face Database Capacity	Up to 20 face databases with 10,000 images, with a total capacity of 2.5 G. Name, gender, birthday, address, credential type, credential No., countries & regions and state can be added to each face image
19	Face Recognition Performance of AI by Camera (Number of Channels)	16 channels
20	SMD Plus by NVR	8 channels: Secondary filtering for human and motor vehicle, reducing false alarms caused by leaves, rain and lighting condition change
21	SMD Plus by Camera	16 channels
22	Metadata Performance of AI by Camera (Number of Channels)	16 channels

Sl. No.	Parameter	Technical Specifications
23	Human Attributes	Top color, top type, bottom color, bottom type, hat, bag, age, gender and umbrella
24	License Plate Database Capacity	1. Create up to 20,000 plate numbers. 2. Blocklist and allow list
25	Alarm Linkage	Record, snapshot, IPC external alarm output, audio, buzzer, log, preset, email
26	Audio Input	1-channel RCA
27	Audio Output	2-channel RCA
28	Audio Compression	G.711a, G.711u, PCM, G726, AAC
29	Disk Group	Support
30	Hard Disk	4 SATA ports, up to 16TB each. The maximum HDD capacity varies with environment temperature
31	Multi-channel Playback	Up to 16 channels
32	Record Mode	General, motion detection; intelligent; alarm; POS
33	Playback Mode	Instant playback, general playback, event playback, tag playback, smart playback (face and motion detection)
34	Smart Phone	iPhone, iPad, Android Phone
35	Interface Ports	3(1 front USB 2.0 port, 2 rear USB 3.0 ports), 1 HDMI, 1 VGA, 1 RS232, 1 eSATA Port, 1 RS485
36	Protocols	HTTP, HTTPS, TCP/IP, IPv4/IPv6, RTSP, UDP, SNMP, NTP, DHCP, DNS, SMTP, UPnP, IP Filter, PPPoE, FTP, DDNS, Alarm Server, IP Search, DH, Multicast, InstaOn cloud, Auto Registration, ONVIF 21.12(Profile T, Profile S, Profile G)
37	Ethernet	2 (10/100/1000 Mbps Ethernet port, RJ-45)
38	Power Supply	100–240 VAC, 50-60 Hz
39	Power Consumption	≤ 10 W (without HDD)
40	Operating Temperature	-20 °C to +60 °C (–4 °F to +140 °F)
41	Operating Humidity	10%–93% (RH)
42	Storage Temperature	-20 °C to +60 °C (–4 °F to +140 °F)

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4MP Bullet Camera Specifications

Sl. No.	Parameter	Technical Specifications
1	Image Sensor	1/2.9" 4MP PS CMOS Image Sensor (0.8758 centimeters)
2	Effective Pixels	2688(H) × 1520(V)
3	Minimum Illumination	0.06 lux@F1.6 (Color, 30 IRE), 0.006 lux@F1.6 (B/W, 30 IRE), 0 lux (IR on)
4	Angle Adjustment	Pan: 0°–360°, Tilt: 0°–90°, Rotation: 0°–360°
5	Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
6	White Balance	Auto, Natural, Street lamp, Outdoor, Manual, Regional custom
7	RAM	128 MB
8	ROM	128 MB
9	DORI Distance	Lens 3.6 mm: 85.4 m (Detect), 34.2 m (Observe), 17.1 m (Recognize), 8.5 m (Identify)
10	Gain Control(AGC)	Auto/Manual
11	Lens Type	Fixed-focal
12	Max. Aperture	F1.6
13	Lens Mount	M12
14	Close Focus Distance	1.7 m
15	Lens	3.6mm fixed Lens
16	IR Number	1 (Multi-core (IR + warm) light)
17	IR	IR Range of 30 Mtr.
18	Warm Light	Warm Light Range of 30 Mtr.
19	IR Control	Auto, Manual
20	Smart Illumination	Support
21	Angle of view	3.6 mm: H: 78°, V: 40°, D: 93°
22	Back Light Compensation	BLC/ HLC/ DWDR
23	Resolution	4MP (2688 x 1520)/ (2560 × 1440), 3MP (2304 × 1296), 2MP (1920 × 1080), 1.3MP (1280 × 960), 720p (1280 × 720), D1 (704 × 576/ 704 × 480), VGA (640 × 480), CIF (352 × 288/ 352 × 240)
24	Video Compression	Instastream, H.265, H.264, H.264H, H.264B, MJPEG (Only supported by sub stream)
25	Noise Reduction	3D NR
26	Motion Detection	OFF/ON (4 areas, rectangular)
27	Video Format	PAL/NTSC
28	Stream Capability	Triple stream
29	Frame Rate	Main stream: 4MP (2688 × 1520)@1-25/30fps/ (2560 × 1440)@1-25/30fps Sub stream 1: 720p (1280 × 720), D1 (704 × 576)@1–25fps/ (704 × 480)@1–30fps, VGA (640 × 480)@1-30fps, CIF (352 × 240)@1-30fps/ (352 × 288) @1-25fps Sub stream 2: D1 (704 × 576)@1–25fps/ (704 × 480)@1–30fps, VGA(640 × 480)@1-30fps, CIF (352 × 240)@1-30fps/ (352 × 288)@1-25fps
30	Privacy Mask	4 areas
31	OSD	Camera title, Date & Time
32	Audio Compression	G.711a, G.711Mu, PCM, G.726, A
33	Bit Rate Control	CBR/ VBR
34	Bit Rate	H.265: 3 kbps-6144 kbps, H.264: 8 kbps-6144 kbps
35	Protocol	SFTP, IPv6, IPv4, DNS,RTCP, NTP, RTP, HTTP, HTTPS, SNMP V3, TLS Version 1.2, TCP/IP, PPPoE, NFS, UDP, ICMP, SSL, DHCP, SMTP, RTSPS, ONVIF (Profile S, Profile G, Profile T), unicast, multicast
36	Day/Night	Auto(ICR)/Color/B/W
37	SDK and API	Support
38	Ethernet	RJ-45 (10/100 Base-T)
39	Alarm Event	Network disconnection, IP conflict, illegal access, Motion detection, Video tampering, Audio detection, Security exception, SMD (human & Motor Vehicle)
40	Mirror Function	Support
41	Smart search	Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos
42	Iris Control	Fixed

Sl. No.	Parameter	Technical Specifications
43	Image Rotation	4MP only support 0°/180° 2MP & lower will support 0°/90°180°/270°
44	User/ Host	6 (Total bandwidth: 36 M)
45	Browser	IE, Chrome, Firefox
46	Certificates	ISO9001, CE, FCC and RoHS, BIS
47	Power Source	12 VDC/ PoE (802.3af)
48	Power Consumption	Basic: 1.6 W (12 VDC), 2.0 W (PoE); Max. : 3.7 W (12 VDC), 4.7 W (PoE) (H.265 + intelligence on + DWDR+ warm light intensity)
49	Weatherproof Standard	IP66
50	Operating Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
51	Operating Humidity	≤95%(RH), non-condensing
52	Storage Temperature	–40 °C to +60 °C (–40 °F to +140 °F
53	Storage Humidity	≤95%(RH), non-condensin

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8 Port Giga Network Switch

Sl. No.	Parameter	Technical Specifications
1	Uplink Ports	2, 1000Mbps; Transmission Distance: 0-100m
2	Network Protocol	IEEE802.3i/802.3u/802.3x/802.3af/802.3ab
3	Switch Capacity	20Gbps Full duplex
4	Packet Forwarding Rate	1.488Mpps/port
5	PWR (Power Indicator)	Light on: Powering, Light off: No Power
6	PoE Ports	8, 1000Mbps; RJ45 ports; Max. 30W Output of Single PoE Port
7	Network Port	10
8	MAC Address Table	2K
9	PoE Standard	IEEE802.3af, IEEE802.3at
10	PoE Power Supply	1/2(+), 3/6(-)
11	Transmission Distance	0-100m/1000Mbps or Port 7-8 Max. 250m/10Mbps via Cat.5e or more under Extend mode
12	PoE Power Budget	96W
13	PoE Feature	All ports support MDI/MDIX
14	ESD	Air discharge: 8KV ; Contact discharge: 6KV
15	Surge Protection	Common mode/RJ45 port: 4KV Differential mode/RJ45 port: 2KV Common mode/Power board: 2KV Differential mode/Power board: 2KV
16	VLANs	Support
17	RJ-45 ACT Indicator	Green light off: Link is disconnected Green light on: Link is connected Green light flash: Data Transmitting
18	Watchdog	Support
19	Forwarding Mode	Store-and-forward
20	Power Source	Built-in Power Supply, Input: 100-240V AC, 50/60Hz
21	Power Consumption	<5W
22	Operating Temperature	-10°C ~ 50°C
23	Storage Temperature	-40°C ~ 70°C
24	Working Humidity	10%-95% , non-condensing

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32 inch FHD Monitor

Display

Screen Size 31.55"/32"

Aspect Ratio 16:9

Resolution 1920×1080 (FHD)

Backlight LED

Brightness/Luminance 200 cd/m²

Contrast 1400:1

Display Color 16.7M(8bit)

Viewing Angle(H/V) 178°(H)/178°(V)

Response time 8ms

Refresh Rate 60Hz

Signals

Input VGA(D-Sub)×1, HDMI×1 , USB×1

Output Speaker 8W×2

General

Power Supply AC100~240V (+/-10%), 50/60 Hz

Work Environment

Temperature 0°C~40°C (32°F~104°F)

Humidity 10%~85%

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HDD

- **Capacity:** 8 TB formatted storage
- **Form Factor:** 3.5-inch LFF (Large Form Factor)
- **Interface:** SATA 6 Gb/s (SATA III)
- **Spindle Speed:** Approximately 5400 RPM (IntelliPower ~5.4K); often marketed as 5400 RPM class
- **Cache (Buffer):** 128 MB
- **Sustained Throughput:** Up to ~178 MB/s
- **Recording Technology:** Advanced Format (AF), likely CMR
- **Surveillance Features:**
    - **AllFrame 4K Technology:** Reduces dropped frames, improves video playback, optimized for NVR/DVR environments
    - **Workload Rating:** Up to 180 TB/year — roughly 3× that of typical desktop drives
    - **Camera Support:** Optimized for up to 64 single-stream HD cameras
    - **Engineered for 24×7 Operation:** Handles elevated temperatures and vibrations typical in surveillance deployments
- **Summary Table**

Feature	Specification
Capacity	8 TB
Form Factor	3.5" (LFF)
Interface	SATA III (6 Gb/s)
RPM	~5400 RPM (IntelliPower)
Cache	128 MB
Throughput	~178 MB/s sustained
Workload Rating	Up to 180 TB/year
Supported Cameras	Up to 64 HD streams
Technology	AllFrame 4K, enhanced reliability
MTBF	Up to 1 million hours

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